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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,032	02/24/2000	Akira Egawa	35.C14311	5722

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EXAMINER

YODER III, CHRISS S

ART UNIT PAPER NUMBER

2612

DATE MAILED: 11/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/512,032

Applicant(s)

EGAWA, AKIRA

Examiner

Chriss S. Yoder, III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 1 is objected to because of the following informalities:

Claim 1 recites the limitation "said first *charge* transfer means" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Egawa (US Patent # 5,850,282).
3. In regard to claim 1, note Egawa discloses the use of a sensor array for receiving reflected light (column 7, lines 24-25), a first transfer means (column 7, lines 34-35; and figure 2, item 12), a second ring-shaped transfer means for integrating the signal from the first transfer means (column 7, line 34; and figure 2, item 18), the first transfer means transfers signals from the sensor array in light projection ON and OFF state at predetermined timing (column 7, lines 44-45; and figure 4, items IRED and ICG), and a transfer frequency of the second transfer means is higher than that of the first transfer means (figure 4, items ICG and CK1).

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4. In regard to claim 2, note Egawa discloses that the predetermined timing of the first transfer means with a phase different from that of the second transfer means (figure 4, items ICG and CK1).
5. In regard to claim 3, note Egawa discloses that the second transfer means comprises a skimming means for determining skimming on the basis of the second signal and a pixel for which skimming is determined skimming by a combination of light projection ON and OFF states (column 3, lines 45-58).
6. In regard to claim 4, note Egawa discloses that the first and second signals are transferred alternately (column 8, lines 8-9) and a light projection OFF pixel goes ahead (column 9, line 48).
7. In regard to claim 5, note Egawa discloses that integration starts from the first signal (column 7, lines 24-26).
8. In regard to claim 6, note Egawa discloses that the light projection repeatedly alternates the ON and OFF states (column 8, lines 8-9).
9. In regard to claim 7, note Egawa discloses that skimming is inhibited when a light projection OFF signal goes ahead of a light projection ON signal in integration of the signal in the second transfer means (column 9, lines 51-58).
10. In regard to claim 8, note Egawa discloses the use of a light projection means for projecting light to an object (column 6, lines 7-9), a plurality of sensor arrays for receiving reflected light (column 6, lines 9-10; figure 1, items 105 and 106), a plurality of first transfer means (figure 1, items 107 and 108), a plurality of second transfer means for integrating the signal from the plurality of first transfer means (figure 1, items

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113 and 114), the first transfer means transfers signals from the sensor array in light projection ON and OFF state at predetermined timing (figure 4, items IRED and ICG), a transfer frequency of the second transfer means is higher than that of the first transfer means (figure 4, items ICG and CK1), and a distance measuring means for measuring a distance using a difference signal between the first signal and the second signal from the second transfer means (column 24, lines 1-6).

11. In regard to claim 9, note Egawa discloses that the predetermined timing of the first transfer means with a phase different from that of the second transfer means (figure 4, items ICG and CK1).

12. In regard to claim 10, note Egawa discloses the use of a sensor array for receiving reflected light (column 7, lines 24-25), a first transfer means (column 7, lines 34-35; and figure 2, item 12), a second ring-shaped transfer means for integrating the signal from the first transfer means (column 7, line 34; and figure 2, item 18), a driving means for controlling the transfer of the first and second signal from the first transfer means to the second transfer means (column 7, lines 5-11), and the second signal is transferred to the first transfer means after the first signal is transferred (column 7, lines 60-67 and column 8, line1).

13. In regard to claim 11, note Egawa discloses that the transfer frequency of the second transfer means is higher than that of the first transfer means (figure 4; items ICG and CK1).

14. In regard to claim 12, note Egawa discloses the integration of the signal in the light projection ON and OFF state (column 7, lines 31-40) and stops integration when a

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difference signal between the ON and OFF state is not less than a predetermined value (figure 34).

15. In regard to claim 13, note Egawa discloses the use of a plurality of sensor arrays for receiving reflected light (column 6, lines 9-10; figure 1, item 105 and 106), a plurality of first transfer means (figure 1, items 107 and 108), a plurality of second ring-shaped transfer means for integrating the signal from the first transfer means (figure 1, items 113 and 114), a driving means for controlling the transfer of the first and second signal from the first transfer means to the second transfer means (column 7, lines 5-11), a distance measuring means for measuring a distance using a difference signal between the first and second signal output from the plurality of second transfer means (column 24, lines 1-6), and the second signal is transferred to the first transfer means after the first signal is transferred (column 7, lines 60-67 and column 8, line1).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US005850282A: note the use of a distance measuring device with a ring shaped transfer means.

US005808726A: note the use of a distance measuring device with a ring shaped transfer means.

US006035138A: note the use of a distance measuring device with a ring shaped transfer means.

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US005848305A: note the use of a distance measuring device with a ring shaped transfer means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (703) 305-0344. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-HELP.

CSY  
November 3, 2003

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
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